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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/771,054      | 01/26/2001  | Richard A. Mallo     | 56147USA8A.002      | 7236             |

7590 07/21/2008  
Attention: Yen Tong Florczak  
Office of Intellectual Property Counsel  
3M Innovative Properties Company  
P.O. Box 33427  
St. Paul, MN 55133-3427

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| EXAMINER |
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FUBARA, BLESSING M

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| ART UNIT | PAPER NUMBER |
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1618

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| MAIL DATE | DELIVERY MODE |
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07/21/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/771,054             | MALLO ET AL.        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | BLESSING M. FUBARA     | 1618                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-34, 36, 37 and 39-51 is/are pending in the application.
- 4a) Of the above claim(s) 37 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-34, 36, 39-40 and 43-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The examiner acknowledges receipt of amendment and remarks filed 5/06/08. Claims 29-34, 36, 37 and 39-51 are pending. Claim 30 is amended. Claims 37 and 42 are withdrawn from consideration. Because Kantner does not teach silylated polyurethane polymer, a secondary reference is brought in to show silylation and the rejection is made final, issues of 112, second paragraph are also discussed below.

#### ***Response to Arguments***

**Previous rejections that are not reiterated herein are withdrawn.**

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 30-34, 36, 40, 41, 43 and 45-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 30 and 43 depend on claim 29 and claims 30 and 43 are confusing because it is unclear if the composition recited in claims 30 and 43 further defines the composition recited in claim 29 for use as the cosmetic article since the composition used in the method of claim 29 is defined by said claim. The compositions used in the method of claims 30 and 43 appear to be different and broader than that used in claim 29.

Claim 43 is dependent on claim 29 where one of the method steps is the application of the composition to a person's skin or nails. It is thus unclear how claim 40 can further limit claim 29 when claim 40 states that the cosmetic article is a hair bleaching agent, hair coloring

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agent, antidandruff agent, corn remover, callus remover or war remover that would be applied to the skin or nail --- hair bleaching, hair coloring, antidandruff agents have expectation for use on hair.

Claim 41 depends on claim 29. Claim 41 uses depilatory agents as the cosmetic article, which has the purpose of removing and as such it is unclear how claim 41 further limits claim 29.

Claims 43 and 45 recite the limitation "the reaction product" in lines 4 and 2 respectively. There is insufficient antecedent basis for this limitation in the claim.

For claim 45, it is unclear if the claim intended to limit the silyl functionalized polyurethane urea polymer as a reaction product of .... If that is the case, the claim may be specifically amended to say that ---the at least one polyurethane polymer that is functionalized with at least one hydrolizable silyl group -- is a reaction product of ....

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 29-34, 36, 39-41 and 43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kantner et al. (US 6,433,073 B1) in view of Baghdachi et al. (US 4,954,598).

Kantner discloses polyurethane dispersion containing isocyanate terminated polyurethane having the structure in instant claims 38 and 43 (abstract; column 4, lines 13-19; column 9, lines 38-67); ethylene diamine (column 4, line 17) meeting the chain extender of claims 30 and 34; mixture of alcohol and water (column 4, line 10) meeting the hydrophilic compound of claim 30; diisocyanate and polyester diol (column 4, lines 15-17) meeting the isocyanate and diol limitations of claims 30-32; the polyols of Kantner have molecular weight of 62 to 10,000, preferably 200 to 5,000, and most preferably from 400 to 3,000 (column 6, lines 41-43) meeting claim 33; the composition is applied to the skin as foundation, moisturizer and is also applied to the nails (column 5, lines 21, 29-37) and when applied, the application process meets the generic method claims 29 and 30, the composition dries to a film of about 0.025 millimeter in thickness (claim 18) meeting instant claim 39. Besides using the composition as a cosmetic, Kantner anticipates to use the composition as hair care product (column 5, lines 38-51), for coating medical devices (column 5, lines 54-62), for sealing, bundling, book binding, packaging (column 4, line 61 to column 5, line 5). While Kantner teaches isocyanate terminated polyurethane in a cosmetic composition in the form of body lotion, skin cream, lipstick, rouge, nail polish, face powder insect repellant for application to the skin or nail, Kantner does not use silylated polyurethane urea polymer. But silylated polyurethane polymer resins are known in the art and

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the silylation provides the polymer advantages such as accelerated curing rate, improved adherence of the polymer and better shelf life according to the teaches of Baghdachi at column 7, lines 1-20. Therefore, taking the teachings of the prior art, one having ordinary skill in the art at the time the invention was made would have reasonable expectation of success that using silylated polyurethane in the composition of Kantner would lead to a cosmetic product having good shelf life, good curing rate and good adhesion when the composition is applied to the nails at least. Thus the claims would have been obvious to a person of ordinary skill in the art when the references are taken together.

#### ***Response to Arguments***

6. Applicant's arguments filed 05/06/08 have been fully considered but they are not persuasive.

Applicant argues that Kantner does not teach silylated polyurethane urea polymer. However, while the examiner agrees with applicant that Kantner does not teach silyl functionalization of the polyurethane-urea polymer, it is noted that the current rejection is made over multiple references with a reliance on Baghdachi for teaching that silylation or silyl functionalization of polyurethane provides a polymer having accelerated curing rate, improved shelf life and adhesion such that accelerated curing rate and adhesion would be advantageous when the composition is applied to the nails.

7. No claim is allowed'

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLESSING M. FUBARA whose telephone number is (571)272-0594. The examiner can normally be reached on 7 a.m. to 5:30 p.m. (Monday to Thursday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blessing M. Fubara/  
Examiner, Art Unit 1618